UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/697,645	10/27/2000	Russell L. Strothmann	023895/257046	4471

826   7590   08/24/2004

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EXAMINER
CAPUTO, LISA M

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/697,645	STROTHMANN ET AL.
	Examiner	**Art Unit**
	Lisa M Caputo	2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 June 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-15,17-28 and 30-39* is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-15,17-28 and 30-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All   b)☐ Some * c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
  application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Amendment

1.   Receipt is acknowledged of the amendment filed 7 June 2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

3.   Claims 1-2, 4-15, 17-28, and 30-39 are rejected under 35 U.S.C. 103(a) as being

unpatentable over DeMarcken et al. (U.S. Patent No. 6,418,413, from hereinafter

"DeMarcken") in view of Waytena et al. (U.S. Patent No. 5,978,770, from hereinafter

"Waytena").

DeMarcken teaches a method and apparatus for providing availability of airline

seats. Regarding claims 1, 14, and 27, DeMarcken teaches a computer implemented

method (i.e. computer program product, method, and system) for predicting travel

resource availability that comprises the steps of receiving a candidate itinerary including

current availability data (the scheduler process 16 produces a set of flights from a travel

request (as recited in claims 2, 15, and 28 of the instant application)) and determining

and outputting a probability that the candidate itinerary is available (the look-up and

retrieval process 94 can return a probability estimate of availability of a seat conforming

to the parameters of the query; also, the threshold level predictor 140 can be used by

the look-up and retrieval process 94 to determine if a stored query is stale). In addition,

DeMarcken teaches that the step of determining a probability comprises the step of

calculating the probability based upon historical availability information (this table 150

could be populated by historical information about how often booking codes were

available in the past for the airline/booking-code/days-before-departure). In addition,

DeMarcken teaches the use of other parameters such as fare rules, lower-priced

itineraries, flight departure dates, and unavailable itinerary to available itinerary status

change in order to determine an itinerary and its probability. Further, DeMarcken

teaches that the availability predictor can determine the availability of seats on a

particular flight of a particular airline, allowing for a prediction of availability in the future

flights, not just the current availability (see Figures 1-8, col 3, line 40 to col 8 line 26,

especially col 3, lines 40-60; col 7 line 52 to col 8 line 26; and col 7-9, especially col 8,

lines 43-65 and col 9, lines 27-40).

Regarding claims 1, 14, and 27, although DeMarcken does teach that a prediction is made on availability and whether that prediction is stale, DeMarcken fails to disclose that the prediction takes into account what will remain available for booking a period of time in the future.

Waytena teaches a system to assign and manage patron reservations. Waytena discloses that each attraction computer 101 maintains information describing the associated attraction, including general static information such as the attraction's capacity, throughput, description of the attraction, height and weight requirements for patrons, geographic location, hours of operation, and the like. In addition, attraction computer 101 maintains information describing the current state and reservation status of the attraction, as will be described more fully below. In one embodiment of the present invention, each attraction computer 101 is associated with a physical queue monitor 103 which monitors the current state of the physical queue for the corresponding attraction, wherein patrons physically line up and wait for admission to the attraction. In one embodiment, monitor 103 is implemented using a series of photoelectric cells to determine the physical position of the end of the line in order to estimate the number of people in the physical queue. In another embodiment, monitor 103 is implemented using a turnstile to count the number of patrons entering the physical queue. In yet another embodiment, monitor 103 is implemented by manually counting or estimating the number of people in the line and providing this information as an input to attraction computer 101. By keeping track of how many people are in the physical queue for the attraction, attraction computer 101 is able to more accurately

estimate current and future availability of the attraction for purposes of making

electronic reservations (see Figure 1, col 5, lines 32-58).

In view of the teaching of Waytena, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to employ a system that is able to

predict a future availability of a patron reservation (see col 4, lines 58-67), such as in an

airline or attraction environment, because the very nature of predicting something is

done in order to provide a patron with accurate information for the future, not just the

current time. If a traveler does not know his/her plans ahead of time, by using a reliable

predictor for the future, he/she will be able to make an informed decision on when to

travel. It is appropriate to combine DeMarcken with Waytena because both references

teach systems that allow for the prediction of availability for patron reservations.

Regarding claims 4-7, 17-20, and 30-33, DeMarcken teaches that the step of

determining a probability comprises the step of calculating the probability based upon

historical availability information (this table 150 could be populated by historical

information about how often booking codes were available in the past for the

airline/booking-code/days-before-departure). In addition, DeMarcken teaches the use

of other parameters such as fare rules, lower-priced itineraries, flight departure dates,

and unavailable itinerary to available itinerary status change in order to determine an

itinerary and its probability (see Figure 8, col 7-9, especially col 8, lines 43-65 and col 9,

lines 27-40).

Regarding claims 8, 21, and 34, DeMarcken teaches a computer implemented

method (i.e. computer program product, method, and system) for increasing reliability of

booking airline travel itineraries comprising the steps of obtaining a candidate itinerary

including availability information (the scheduler process 16 produces a set of flights from

a travel request) and determining whether the availability information should be updated

based on the candidate itinerary and a situation table (wherein the situation table is

created with sample itineraries and historical availability information as recited in claims

9-10, 22-23, and 35-36 of the instant application) (the threshold predictor 140 could be a

table similar to FIG. 8 that includes for every airline/booking-code/days-before-departure

entry, a number of hours after which a database answer will be considered stale. This

table could be trained on historical data by recording for each airline/booking-

code/days-before-departure combination the average maximum number of hours prior

to a query that other queries returned the same answer. For example, if in the past on

American 3 days before departure in booking code Q, query answers remained the

same for an average of 8 hours, then 8 hours would be stored in the table, and

database queries for AA/Q/3-days-before-departure would be considered stale if they

were more than 8 hours old) (see Figures 1-8, col 3 line 41 to col 8 line 16).

Regarding claims 8, 11-13, 21, 24-26, 34, and 37-39, DeMarcken does not

disclose a situation table that uses information from two data sources. Even though

DeMarcken does indeed teach the use of a situation table that includes the number of

hours after which an entry corresponding to airline/booking-code/days-before-departure

entry becomes stale (see Figure 8, col 8, lines 3-65), DeMarcken fails to teach that

availability information is obtained from two data sources, that a difference between the

availability information is determined, and that an indication (based on the difference

calculated) that the availability information should be updated prior to booking is stored

in the situation table. Even further, DeMarcken does not teach the specific limitations of

adding the indication to the table only when the itinerary is not rendered irrelevant by

the fare rules, or only when a difference between the availability information from the

two sources exceeds an error threshold.

Waytena teaches a system to assign and manage patron reservations. Waytena

discloses that each attraction computer 101 maintains information describing the

associated attraction, including general static information such as the attraction's

capacity, throughput, description of the attraction, height and weight requirements for

patrons, geographic location, hours of operation, and the like. In addition, attraction

computer 101 maintains information describing the current state and reservation status

of the attraction, as will be described more fully below. In one embodiment of the

present invention, each attraction computer 101 is associated with a physical queue

monitor 103 which monitors the current state of the physical queue for the

corresponding attraction, wherein patrons physically line up and wait for admission to

the attraction. In one embodiment, monitor 103 is implemented using a series of

photoelectric cells to determine the physical position of the end of the line in order to

estimate the number of people in the physical queue. In another embodiment, monitor

103 is implemented using a turnstile to count the number of patrons entering the

physical queue. In yet another embodiment, monitor 103 is implemented by manually

counting or estimating the number of people in the line and providing this information as

an input to attraction computer 101. By keeping track of how many people are in the

physical queue for the attraction, attraction computer 101 is able to more accurately

estimate current and future availability of the attraction for purposes of making

electronic reservations. Further, central attraction control interface 104 is implemented

in one embodiment as a conventional centralized computer system allowing access to

all attraction computers 101 by park staff. Interface 104 facilitates monitoring of virtual

and physical queues for all attractions, as well as reservation schedules and other

information describing the state of the attractions. Interface 104 also allows park staff to

manually change the data describing any of the individual attractions, such throughput

estimates, hours of operation, reservation schedules, attraction information, and any

other information stored in attraction computers 101, as needed. This may be useful, for

example, when a particular attraction is functioning at lower than usual capacity due to

some unforeseen factors, or when the hours of operation of an attraction are changed

(see Figure 1, col 5, lines 32-58 and col 6, lines 16-53). Hence, Waytena teaches that a

multitude of data sources can be used to obtain data.

In view of the teaching of Waytena, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to employ two data sources to obtain

and compare/update information because when using two data sources, more

comprehensive information is able to be obtained, hence a better result is able to be

found, which in turn allows the patron to be able to make better decisions. In addition, it

is easy to be able to modify DeMarcken with Waytena because the multitude of

information from the sources provided in Waytena is able to be stored within the same

situation tables and databases in DeMarcken. This information is comparable because

both systems deal with patrons and reservation predictability.

Response to Arguments

4.   Applicant's arguments with respect to claims 1-2, 4-15, 17-28, and 30-39 have

been considered but are moot in view of the new ground(s) of rejection.

5.   Examiner appreciates applicant's argument that DeMarcken does not teach or

disclose that a probability that the candidate itinerary will remain available for booking

for a period of time in the future based at least in part upon the current availability

information and historical availability information for the candidate itinerary as recited in

independent claims 1, 14, and 27, and their dependent claims and has cited new prior

art in the form of Waytena.

With regards to independent claims 8, 21, and 34, and their dependent claims

11-13, 24-26, and 37-39, examiner respectfully submits that near prior art in the form of

Waytena has been found and these claims are no longer considered to have allowable

subject matter status. Examiner apologizes for any inconvenience to the applicant.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure: U.S. Patent No. 5,237,499 to Garback which discloses a

computer travel planning system and U.S. Patent No. 5,331,546 to Webber et al. which

discloses a trip planner that optimizes travel itinerary.

7.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to *Lisa M. Caputo* whose telephone number is **(571) 272-
2388**. The examiner can normally be reached between the hours of 8:30AM to 5:00PM
Monday through Friday. If attempts to reach the examiner by telephone are

unsuccessful, the examiner's supervisor, Michael G. Lee can be reached at **(571) 272-2398.** The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**lisa.caputo@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LMC
August 20, 2004

**THIEN M. LE
PRIMARY EXAMINER**